



# User's Manual

Automotive Diagnostic Smoke Leak Detector










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Thanks for purchase this product, this user manual shall be carefully read before first time use of the product.

Always keep this manual handy since it contains important information about using the product.

### Warning

	<p>Operator shall have basic knowledge about structure of vehicle and the engine. Vehicle service book is required.</p>
	<p>To ensure better test result, it's required there's no wind in the operating area.</p>
	<p>Do NOT use the product on smoke sensitive component. Eg. Smoke residual might reduce sharpness of head lights if apply to head light housing.</p>
	<p>ONLY low density mineral oil based fluid is allowed to use as smoke oil. Johnson&amp;johnson's baby oil(pink label) is compatible. Use funnel to avoid spread the oil to other parts of the unit.</p> 
	<p>Check oil level before use, if oil level is lower than the middle of the gauge, the unit would need a refill, but do not overfill the unit beyond the gauge.</p>
	<p>The product is only allowed to use while ignition's off.</p>
	<p>Be sure to use 12V vehible battery, and the battery shall be full charged and voltage not lower than 12V.</p>
	<p>Use bright light torch/ halogen light to help find the leaks.</p>
	<p>Wear goggles if available.</p>

### Scope of use

The smoke leak detector, with its WYSIWYG efficiency, is widely applicable to the leak test of various pipeline systems and quick pinpoint leak position. This product can effectively find the leakage position by simulating most suitable operating pressure condition of the vehicle pipeline, and introducing the smoke into the vehicle pipeline system through appropriate adapters. It can be used to test air intake system, exhaust system, inter-cooling system, oil circuit, water lines and other pipeline systems that users can image.

### Specifications

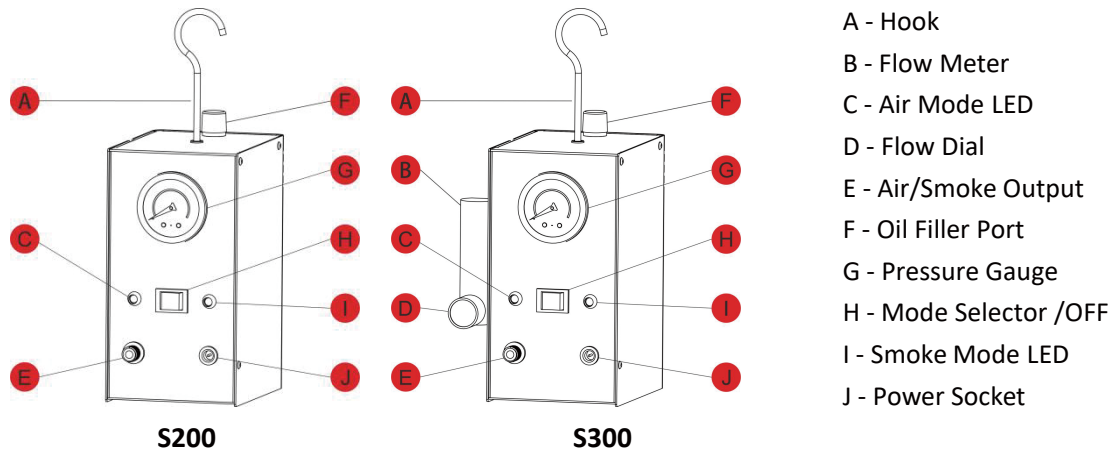
Power source: 12V fully charged vehicle battery

Current: 6A




Flow rate: < 6 LPM

Pressure output: 0.8~1.0 bar

### Structure



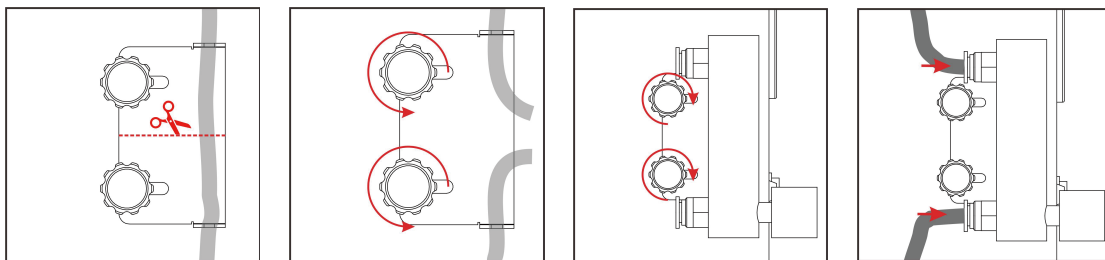
### Parts List

Picture	Article	QTY (S200)	QTY (S300)	Description
	Power Cord	1	1	For connecting power supply to the unit. Fitting size 5.5x2.5mm
	Delivery Hose	1	1	Air/smoke delivery hose to introduce air/smoke from main unit to the system directly or via adapters.
	Funnel	1	1	Refilling assistant tool to prevent the smoke oil from flowing into the casing during filling, which would cause unexpected failure.

	Intake Bladder	1	1	Applicable for 25~140mm opening, especially when the opening is not round shaped. <b>Note:</b> avoid contact to oil and high temperature.
	Service Replacement	1	1	Replacement rubber and clamps for intake bladder.
	Adapter Cone		1	Applicable for 30~80mm round shaped opening. Eg.intake.
	Adapter Cone Set	1		Applicable for 25~55mm round shaped opening, eg.fuel tank, cooling system, engine oil filler port, exhaust etc.
	EVAP Adapter	1	1	For fitting to the evap service port, mostly available on vehicle made in North America.
	EVAP Removal Tool	1	1	EVAP service port valve removal tool, note the thread is anti-clockwise.
	Block-cap set		1	Mostly used when work on leak test on vehicle engine while its unmounted from the vehicle.

### Upgrade

In case S200 was purchased and need upgrade to S300, operator shall mount the flow meter while the upgrade package is in hand.



1. Cut off the hose at the middle of the rack.

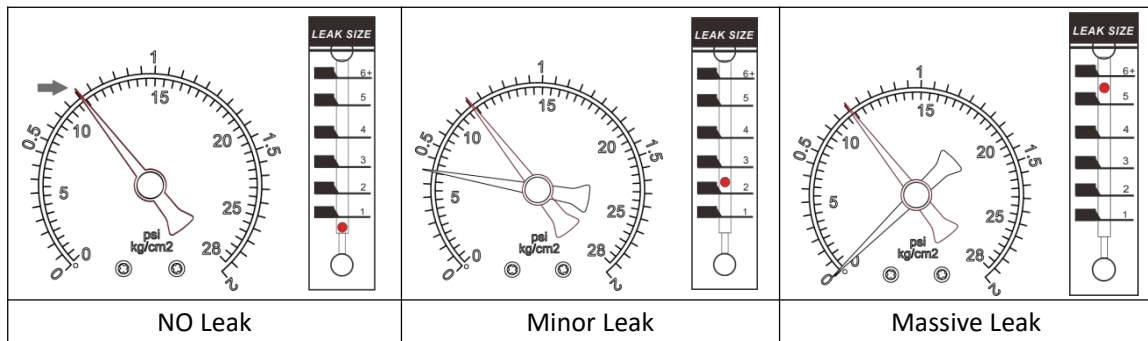
2. Take off the screws.

3. Mount the flow meter.

4. Connect hoses.

### Leak Status





### Troubleshooting

Index	Error	Possible Reason	Solution
#1	LED not ON	Mistaken positive to negative	Connect to power source correctly.
#2		Poor contact of power line	Check with meter if the power line is broken , confirm and replace the power lines.
#3	Pump's on but no air output	Flow Dial not open	Open the Flow Dial anti-clockwise.
		Pump failure	Replace a new pump
#4	No smoke output	No air output	Make reference to #3
		Smoke oil out or overfilled	Check oil level; turn unit upside down while the oil filler port is open, and refill to the correct level.
		Voltage Low	Check battery voltage if its over 12V.
		Heater damaged	Heater damaged if current consumption less than 3Amp, replace the heater.
#5	Weak smoke, obvious oil drops from the output	Smoke oil not compatible	Change proper smoke oil.
		Voltage Low	Check battery voltage if its over 12V.
#6	Slow oil drops from the output	Normal smoke condensation	Periodically take off the smoke hose and blow it with air gun.
#7	Sudden stop of smoke output	Overheat protection activated	Cool down the unit before use again.

### Warranty

The main unit entitle 24month free parts service. The accessories are consumables and no warranty would apply.